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5.7 HW

p261 21-60 odd

21. $\sqrt[3]{6}$ 23. $\sqrt[3]{c^2}$ 25. 23^k 27. $2z^k = 2\sqrt[2]{z}$

29. 2 31. $\frac{1}{5}$ 33. $\frac{1}{-2^k} = \frac{1}{9}$ 35. $81^{\frac{1}{2}} \cdot 81^{\frac{3}{2}} = (81^1)$

37. $(\frac{8}{27})^{\frac{2}{3}} = (\frac{2}{3})^{\frac{4}{3}}$ 39. $(\frac{4}{3})^{\frac{1}{3}}$ 41. $y^{\frac{12}{5}} = y^{\frac{4}{5}}$ 43. $b^{\frac{5}{6}} = \sqrt[6]{b^5}$

45. $w^{-\frac{4}{5}} = \frac{1}{w^{\frac{4}{5}}} = \frac{\sqrt[5]{w}}{w}$ 47. $t^{\frac{1}{4}} = \sqrt[4]{t}$ 49. $\frac{a^{-k}}{6a^{\frac{5}{3}}a^{-\frac{1}{2}}}$

51. $\frac{y^{\frac{3}{2}}}{y^{\frac{1}{2}} + 2} \cdot \frac{y^{\frac{1}{2}} - 2}{y^{\frac{1}{2}} - 2} = \frac{y^2 - 2y^{\frac{3}{2}}}{y - 4}$
 $\frac{y^2 - 2y\sqrt{y}}{y - 4}$

$\frac{a^{\frac{1}{2}}}{6a^{\frac{5}{3}}a^{\frac{1}{2}}} = \frac{\frac{3}{12} - (\frac{4+6}{12})}{\frac{3}{12} - \frac{10}{12} - \frac{1}{12} - 7} = \frac{a^{\frac{5}{6}}}{6a}$
 $\frac{\sqrt[6]{a^5}}{6a}$

53. $\sqrt[3]{25} = \sqrt[3]{5^2}$

55. $17^{\frac{1}{2}} \cdot 17^{\frac{2}{3}}$
 $17^{\frac{3}{6}} \cdot 17^{\frac{4}{6}} = 17^{\frac{7}{6}} = 17\sqrt[6]{17}$

57. $\sqrt[8]{25x^4y^4}$
 $\frac{5^{\frac{1}{4}}x^{\frac{1}{2}}y^{\frac{1}{2}}}{\sqrt[4]{5x^2y^2}}$

61. $\sqrt[3]{\sqrt{8}}$
 $\sqrt[3]{\sqrt[2]{8}} = \sqrt[6]{8} = \sqrt[3]{2}$

59. $\frac{xy}{\sqrt{z}}$ $\frac{xy\sqrt{z}}{z}$

* exi. Notes
 $\sqrt[4]{9x^4}$
 $(3^2x^4)^{\frac{1}{4}} = 3^{\frac{1}{2}}x = \sqrt{3}x$